

REMARKS:

This paper is herewith filed in response to the Examiner's Office Action mailed on October 31, 2007 for the above-captioned U.S. Patent Application. This office action is a rejection of claims 1, 2, 4-9, and 11-22 of the application.

More specifically, the Examiner has rejected claims 1, 2, 4-9, 11-17, 19, and 21 under 35 USC 103(a) as unpatentable over Lin (US5831976) in view of Iseyama (US5787346) further in view of Amitay (US5371780). The Applicant respectfully traverses the rejection.

Claims 1, 8, and 15 have been amended for clarification. Claim 5 has been amended for mere formalities. Support for the amendments can be found at least on page 8, line 11 to page 9, line 14. No new matter is added.

Regarding the rejection of claim 1 under 35 USC 103(a) over Lin, Iseyama, and Amitay the Applicants traverse the rejection.

Lin relates to partitioning a radio channel into a plurality of "virtual" channels, where each virtual channel is assigned a plurality of the cells selected such that the cells carry simultaneous transmissions on a single radio channel without causing excessive interference with one another, (Abstract).

The Examiner states that "Lin fails to disclose predetermining, for each base station, a classification according to a probability of interference at the channel with other base stations of the plurality of base stations upon a request of at least one mobile station to initiate communication via a base station." As a result, the Examiner relied on Iseyama to address this failure of Lin to disclose this element.

As cited by the Examiner Iseyama relates to operations performed during a handover from one mobile station to another including determining "whether the frequency currently being used by

the mobile station is a shared assigned frequency and whether this frequency has been assigned to another mobile station in another time slot,” (col. 5, lines 51-54).

Further, Iseyama discloses:

“In such case the radio base station control unit 18 refers to the management table 18a and checks to determine **(a) whether the frequency F2 currently being used by the mobile station 11 is a shared assigned frequency and (b) whether this frequency has been assigned to another mobile station in another time slot,**” (emphasis added), (col. 7, lines 53-58); and

“The management table 18a is configured so that it is possible to identify, for each of the radio frequencies (F1~F3), **(a) the number of the radio base station using the radio frequency, (b) the number of the mobile station using the radio frequency in each time slot, and (c) whether this radio frequency is one that has been assigned for shared use by the radio base stations,**” (emphasis added), (col. 9, lines 47-53).

The Applicants contend that as cited Iseyama appears to only be concerned with whether there is a shared frequency and whether the shared frequency is idle.

The Applicants contend that Iseyama at least can not be seen to disclose or suggest **determining a classification for each slot of the group of slots according to a probability of interference with other base stations of the plurality of base stations, comprising assigning as owned by one of said base stations and as avoided by other of said base stations** a first slot in which said other base stations interfere with said one base station, as in claim 1.

Further, the Examiner indicates that the combination of Lin and Iseyama fails to disclose allocating on request a channel according to the determined classification and desired quality class of transmission. In order to address this failure of Lin and Iseyama the Examiner has relied on Amitay.

Amitay relates to allocating communication resources to subscribers based on a unique code assigned to the subscribers. In Amitay the unique code may comprise a priority designation and the priority designation can signify a quality of service to which the subscriber subscribes.

Amitay discloses that the subscribers having the highest priority levels are first to be given communications resource assignments, (col. 8, line 58 to col. 9, line 9).

The Applicants note that claim 1 has been amended for clarification to recite:

“A method comprising: determining, for each base station of a plurality of base stations capable of communicating with at least one mobile station via any of a group of slots in a communication system, a classification for each slot of the group of slots according to a probability of interference with other base stations of the plurality of base stations, comprising assigning as owned by one of said base stations and as avoided by other of said base stations a first slot in which said other base stations interfere with said one base station, assigning as owned by individual ones of said other base stations and as avoided by said one base station other slots in which said individual ones of said other base stations interfere with said one base station, and assigning as shared by said one base station and another of said other base stations a shared slot in which said another of said other base stations interferes with said one base station if used simultaneously with said one base station and which are not assigned as owned by any of the base stations; and allocating on request a slot whose determined classification matches a desired quality class of the request.”

The Applicants notes that as cited by the Examiner Amitay discloses:

“The assignment procedure of FIG. 3 requires that the telephone equipment of **each subscriber to the cellular network be assigned a unique identification code. That code may comprise a priority designation** and a unique identification number, such as a social security number. **The priority designation may signify the quality of service to which the customer subscribes.** The priority designation may also signify some particular current need of a subscriber requesting access to the cellular network,” (emphasis added), (col. 8, lines 58-64).

Further, Amitay discloses:

“The identification code is used by the base station **to perform a procedure involving an assignment cycle composed of an auction period during which one of a plurality of contending subscribers having the highest priority level is identified and a resource assignment period during which the identified highest level priority subscriber is assigned an available resource,**” (emphasis added), (col. 9, lines 14-20).

It is noted that in Amitay, the auction procedure appears to determine which subscriber contending for a resource has the highest priority level and also to eliminate the contenders who have a duration of transmission time which exceeds the longest possible propagation delay time T_d established in Amitay, (col. 9, lines 27-34). The Applicant submits that Amity appears to disclose motivation for this procedure where Amitay discloses:

“In any cellular architecture with significant amounts of communication traffic, particularly in microcellular architectures such as the ones shown in FIGS. 1 and 2, it is important that available communications resources be assigned to requesting subscribers as rapidly as possible. It is especially important where there are many fast moving mobile subscribers to a network having small size microcells and in situations where there are more than one subscriber contending for assignment of available resources at the same time,” (col. 8, lines 41-50).

The Applicant submits that Amitay is seen to merely assign resources to subscribers based on their priority levels, where the subscriber with the highest priority level is the first to be assigned the resources.

Further, the Applicants contend that Amitay does not disclose or suggest allocating on request a slot whose determined classification matches a desired quality class of the request as in claim 1.

Amity discloses that “**the base station 24 searches for unused communications resources** and when such resources are found, the base station 24 [...] assigns a particular time slot and carrier frequency,” (col. 6, lines 37-40). Further, Amitay discloses that after the auction is complete and the resource assigned then “**The next unused and available communications resource is then auctioned** to the other contending subscribers which lost out to the winning subscriber described above and to any new contending subscribers which arrived during the previous assignment cycle,” (emphasis added), (col. 10, lines 13). Thus, it can be seen that Amitay appears to search for and assign only unused communication resources. The Applicants submit that Amitay does not relate to allocating a slot whose determined classification matches a desired quality class of transmission as in claim 1.

S.N.: 09/658,731
Art Unit: 2617

Moreover, it is noted that as stated above in Amitay the priority designation may signify a quality of service to which the customer subscribes. However, in all of Amitay the Applicants can find nothing which can be seen to disclose or suggest allocating on request slots **whose determined classification matches a desired quality class of the request** as in claim 1.

For at least the reasons stated the Applicants contend that Amitay does not disclose or suggest at least where claim 1 recites **“allocating on request a slot whose determined classification matches a desired quality class of the request.”**

Furthermore, for at least the reasons stated the Applicants contend that the references cited can not be seen to disclose or suggest claim 1, and the rejection of claim 1 should be removed.

In addition, for at least the reason that the independent claims 8 and 15 recite language similar to that of claim 1 as noted above, the references cited do not disclose or suggest these claims, and all the independent claims 1, 8 and 15 should be allowed.

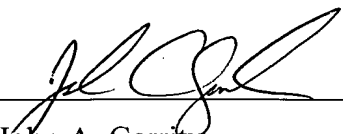
Furthermore, as the claims 2, 4-7, and 17-18; claims 9, 11-14, and 19-20; and 16, and 21-22 depend from claims 1, 8, and 15 respectively, the references cited do not suggest or disclose these claims, and all the claims 1-2, 4-9, and 11-22 should be allowed.

Based on the above explanations and arguments, it is clear that the references cited cannot be seen to disclose or suggest claims 1-2, 4-9, and 11-22. The Examiner is respectfully requested to reconsider and remove the rejections of claims 1-2, 4-9, and 11-22 and to allow all of the pending claims 1-2, 4-9, and 11-22 as now presented for examination.

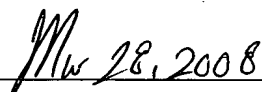
For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record. Should any unresolved issue remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

S.N.: 09/658,731
Art Unit: 2617

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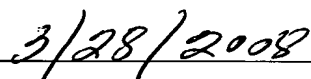
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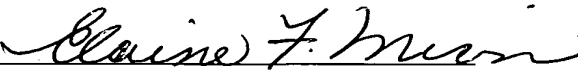
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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. BOX 1450, Alexandria, VA 22313-1450.



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